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**PATENT** 

## Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

## **Listing of Claims:**

- 1. 58. (Canceled)
- 59. (Original) A mutant strain of *H. pylori*, said mutant strain having deactivated at least one gene encoding a glycosyltransferase involved in the biosynthesis of a *H. pylori* lipopolysaccharide (LPS).
- 60. (Original) A mutant strain according to claim 59, wherein the glycosyltransferase is involved in the biosynthesis of the O-chain of the LPS.
- 61. (Canceled)
- 62. (Currently Amended) A mutant according to claim 59, wherein the glycosyltransferase is coded by open reading frame frames 0826, 0159, 0479 or 1191.
- 63. (Original) A vaccine composition comprising an antigen derived from a mutant strain of *H. pylori* according to claim 59.
- 64. (Original) A vaccine composition according to claim 63, wherein the antigen is an at least partially purified lipopolysaccharide.
- 65. (Original) A vaccine composition according to claim 64, wherein the antigen is conjugated to a protein.

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- 66. (Original) A live attenuated vaccine composition comprising a mutant strain of *H. pylori* according to claim 59.
- 67. 70. (Canceled)
- 71. (New) A mutant according to claim 62, producing LPS molecule with the structure:

1

7

 $\alpha Glc(1-3)\alpha Glc(1-4)\beta Gal(1-7)D\alpha DHep(1-2)L\alpha DHep(1-3)L\alpha DHep(1-5)Kdo-lipid\ A$ 

1

aGlc(1-[-6)aGlc(1-]n-2~DaDHep

7

| ← {-3)DDHep(1-, -2)DDHep(1-, -6)DDHep(1-}-

 $\alpha LFuc \leftrightarrow \beta GlcNAc$  .